

WHAT IS CLAIMED IS:

Sub A1
5 1. A process of preparing a composite comprised of at least one elastomer which contains a dispersion therein of a functionalized carbon black comprises blending a particulate, functionalized carbon black with

(A) an organic solvent solution of a conjugated diene-based elastomer selected from at least one elastomer as a homopolymer of isoprene and/or 1,3-butadiene and elastomer as a copolymer of isoprene and/or 1,3-butadiene with styrene, followed by removing said solvent therefrom to recover said composite, or

10 (B) an aqueous emulsion of a styrene/butadiene copolymer elastomer followed by removing said water therefrom to recover said composite;

wherein said functionalized carbon black is a rubber reinforcing carbon black modified by having domains of at least one moiety on the surface thereof selected from

(A) silanol, siloxane, titanium oxide, titanium hydroxide, zirconium oxide, zirconium hydroxide and aluminum hydroxide groups;

15 (B) aryl polysulfide, alkyl polysulfide, thiol, thiophenol, epoxide, allyl and vinyl groups; and

(C) dibenzyl disulfide, ditolyl disulfide, bis(propyl) disulfide, bis(propyl) tetrasulfide, n-propyl thiol, n-butyl thiol, orthomethylthiophenol, n-propyl epoxide, n-butyl epoxide, methyl allyl, propyl allyl, methyl vinyl and propyl vinyl groups.

20 2. The process of claim 1 wherein said composite is prepared adding said functionalized carbon black as a dispersion thereof in an organic solvent to an organic solvent solution of elastomer.

25 3. The process of claim wherein said composite is composite is prepared by adding said functionalized carbon black as a dispersion thereof in water to an aqueous emulsion of said styrene/butadiene elastomer.

30 4. The process of claim 2 wherein said solvent solution of said elastomer is a polymerizate.

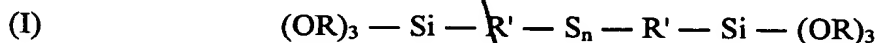
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5. A composite is provided which is comprised of an elastomer with a dispersion therein of a functionalized carbon black prepared by the method of claim 1.

5 6. The composite of claim 5 which contains an additional reinforcing filler selected from at least one of carbon black and amorphous precipitated silica.

7. The composite of claim 6 wherein at least a portion of said precipitated silica is pre-treated, prior to blending with said composite, by reacting said precipitated silica, with an organosilane of the general formula (I):



15 wherein R is the same or different alkyl radical selected from at least one of ethyl and methyl radicals; R' is the same or different radical selected from at least one of ethyl, propyl and butyl radicals; and n is a value from 2 to 6 with an average of from 2 to 2.6 or from 3.5 to 4.

20 8. The composite of claim 7 wherein said organosilane is a bis(3-alkoxysilylalkyl) polysulfide with an average of from 2 to 2.6 or from 3.5 to 4 connecting sulfur atoms in its polysulfidic bridge.

9. The composite of claim 7 wherein said organosilane is bis (3-ethoxysilylpropyl) polysulfide having an average of from 2 to 2.6 connecting sulfur atoms in its polysulfidic bridge.

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10. An article of manufacture having at least one component comprised of the composite of claim 5.

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11. A tire having at least one component comprised of the composite of claim

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12. A tire having at least one component comprised of the composite of claim

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13. A tire having at least one component comprised of the composite of claim 7.
14. A tire having at least one component comprised of the composite of claim 8.
15. A tire having a tread comprised of the composite of claim 5.
16. A tire having a tread comprised of the composite of claim 6.
17. A tire having a tread comprised of the composite of claim 7.
18. A tire having a tread comprised of the composite of claim 8.
19. A tire having a tread comprised of the composite of claim 9.
20. A tire having a tread comprised of the composite of claim 10.

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